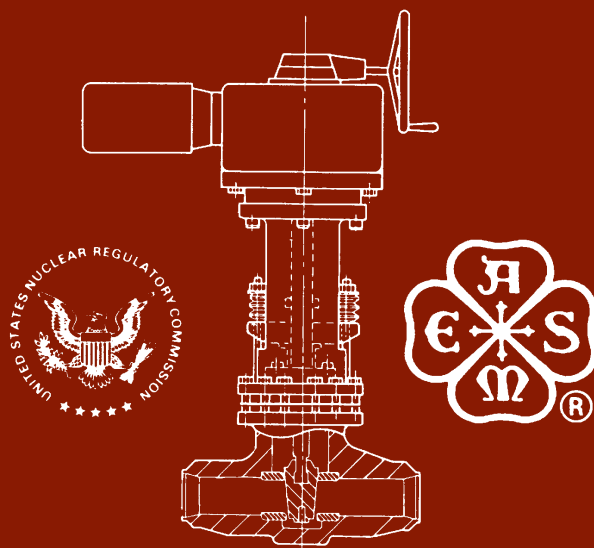


THE SIXTH NRC/ASME SYMPOSIUM ON VALVE AND PUMP TESTING

FINAL PROGRAM



**July 17-20, 2000
Hyatt Regency Washington
400 New Jersey Avenue, NW
Washington, DC 20001**



SYMPOSIUM INFORMATION

The U.S. Nuclear Regulatory Commission (NRC) and the American Society of Mechanical Engineers (ASME) will jointly sponsor the Sixth NRC/ASME Symposium on Valve and Pump Testing on July 17-20, 2000, in Washington, DC at the Hyatt Regency Washington. This symposium is held every two years to facilitate the exchange of information on technical, programmatic, and regulatory issues associated with the testing of valves and pumps used in nuclear power plants. Papers will be presented on important current issues. The audience will have an opportunity to discuss ideas and ask questions during the technical sessions.

SYMPOSIUM REGISTRATION

Registrants will receive a discount rate of \$375.00 if their registration form is postmarked not later than July 1, 2000. After that date, the late registration fee and on-site registration fee will be \$450.00. Admission for one person to the banquet on July 18, 2000 is included in the fee. Further details are provided in the Registration Form in the back of this Final Program.

HOTEL REGISTRATION

A block of rooms has been reserved for symposium attendees at the Hyatt Regency Washington at a rate of \$139 single/\$159 double per night. Attendees may make hotel reservations using the form contained in this program.

KEYNOTE SPEAKER



Greta Joy Dicus
Commissioner, USNRC

The Honorable Greta Joy Dicus was appointed Chairman of the U.S. Nuclear Regulatory Commission by President Clinton, effective July 1, 1999, and served in that capacity until October 29, 1999. Her current term expires June 30, 2003.

Commissioner Dicus served her first term as Commissioner from February 15, 1996 until June 30, 1998, and was re-nominated by President Clinton in May 1998, beginning her second term in October 1998. From July 1, 1999 to October 29, 1999, she served as Chairman of the NRC. Between her first and second terms, she served as an outside expert to the U.S. Defense Nuclear Facilities Safety Board.

Commissioner Dicus is a radiation biologist. Before joining the NRC, Ms. Dicus was confirmed by the U.S. Senate as a member of the Board of Directors of the U.S. Enrichment Corporation (USEC). She served on the USEC Board from March 1994 to February 1995.

From 1980 to 1995, Ms. Dicus worked at the Division of Radiation Control and Emergency Management at the Arkansas Department of Health, serving as the Director of the Division for nine years. Concurrently, from 1991 to 1993, she served as Chairman of the Central Interstate Low-level Radioactive Waste Commission. She also served on the Advisory Committee on Transportation of Radioactive Materials for the Southern States Energy

Board (SSEB), as well as on the SSEB TRU Working Group. Among other appointments, Ms. Dicus has served as the Arkansas Liaison with the NRC, the Commissioner of the Central States Low-Level Waste Compact Commission, and a member of the Governor's Low-Level Radioactive Waste Advisory Group.

For 16 years, from 1961 to 1977, Ms. Dicus conducted research in radiation health effects at Harvard Medical School, Rice University, and the University of Texas Southwestern Medical School.

An Arkansas native, Ms. Dicus was educated in Texas. She graduated with a Bachelor of Arts degree in biological sciences from Texas Women's University in 1961, and earned a Master's Degree in radiation biology from the University of Texas Southwestern Medical School in 1967.

Ms. Dicus is a member of the Health Physics Society, Sigma Xi, and the Conference of Radiation Control Program Directors.

KEYNOTE SPEAKER



Robert E. Nickell
President, ASME International
1999-2000

Robert E. Nickell, Ph.D., is the 118th president of ASME International (The American Society of Mechanical Engineers).

Dr. Nickell has been a member of ASME since 1968 and has contributed to the Society's standards development and technical publishing activities for 26 years. Leadership positions in the Society include chair of the Pressure Vessel and Piping Technical Division, 1979-1980; vice president of communications, 1985-1988; member of the Board of Governors, 1992-1994; and until elected as president, chair of the Society's Finance and Investments Committee since 1994.

His technical expertise is in the area of fossil and nuclear power plants, specifically vessel and component design, fuel processing and waste management. As president of Applied Science & Technology, Poway, Calif., Dr. Nickell provides engineering consulting services on life extension of commercial power plants, structural integrity of components, and the handling and disposal of spent fuel.

Following his graduation from the University of California (at Berkeley), where he received a Ph.D. in engineering science in 1967, Dr. Nickell joined the firm of Rohm & Haas, Huntsville, Ala., as a research engineer.

In 1968, he went to work for Bell Telephone Laboratories, Whippany, N.J., serving as a technical staff member and as supervisor of the solid mechanics

staff. In 1971, Bell Labs assigned him to a temporary academic post at Brown University, from which he returned to the Bell System at Sandia National Laboratories in 1973. At Sandia, he directed government-funded projects on spent fuel handling and transportation, elevated temperature design of reactor components, and nuclear power plant design standards and safety. Later, he worked as a program and project manager at the Electric Power Research Institute, 1980-1984, directing activities on weld repairs, piping design, nuclear spent fuel transportation and stress corrosion cracking.

Dr. Nickell's technical expertise in power plant equipment is reflected in more than 70 publications. Honors and awards include Sigma Xi and the Naval Structural Mechanics Award of the American Institute of Aeronautics and Astronautics.

ASME International is a 125,000-member organization focused on technical, educational and research issues. ASME conducts one of the world's largest technical publishing activities, holds some 30 technical conferences and 200 professional development courses each year, and sets internationally recognized manufacturing and industrial codes and standards.

THE SIXTH NRC/ASME SYMPOSIUM ON VALVE AND PUMP TESTING SCHEDULE OF EVENTS

MONDAY, JULY 17, 2000

4:00 PM - 9:00 PM
REGISTRATION

Registration on-site, check-in for pre-registered guests and distribution of materials will be completed at this time. Attendees can register and receive their symposium information package, proceedings, and banquet and beverage tickets. Attendees are urged to register at this time to avoid overcrowding the following morning.

TUESDAY, JULY 18, 2000

7:30 AM - 4:30 PM
REGISTRATION

Registration on-site, check-in for pre-registered guests and distribution of materials will be completed at this time. Attendees can register and receive their symposium information package, proceedings, and banquet and beverage tickets.

8:30 AM TO 12 NOON: GENERAL SESSION
OPENING ADDRESSES

Opening Remarks:
John Allen, ASME, and Eugene Imbro, USNRC,
Symposium Co-Chairs

Pumps, Dumps and Political Humps
Commissioner Greta Joy Dicus, USNRC

The ASME/NRC Working Relationship for the
Benefit of the Nuclear Industry
Robert E. Nickell, *President ASME 1999-2000*

Future Trends in Nuclear Codes and Standards
John Ferguson, *ASME Vice President, Nuclear Codes
and Standards*

The Changing Regulatory Environment and its
Impact on Codes and Standards
John W. Craig, *Director, Div. of Engineering (Office
of Nuclear Regulatory Research), USNRC*

Reactor Safety in a Risk-Informed, Competitive
Environment—the Human Element
John Groth, *Chairman, ASME Committee on
Operation and Maintenance of Nuclear Power Plants*

1:00 PM - 5:00 PM: SESSION 1

- 1(a) Safety-Relief Valves/Check Valves
Session Chair: Chris Hansen, *Vermont Yankee
Nuclear Power Corp.*
1. Success Revisited - Solving Performance Problems Using Nozzlecheck Valves
Gregg Joss, *Rochester Gas & Electric, Ginna Station, Inservice Test Coordinator*; Jim Zulawski, *Rochester Gas & Electric, Ginna Station, Performance Monitoring Supervisor*
 2. Main Steam Safety Valve Sticking
Tom Esselman and William J. McBrine, *Altran Corp*
 3. Check Valve Condition Monitoring at Wolf Creek
Shawn Comstock, *Wolf Creek Nuclear Operating Company*
 4. Development of Main Safety Relief Valve For BWRs
Kikuo Takeshima, Yoshihisa Kiyotoki, Yasuhiro Ogawa, *Nuclear Plant Construction and Engineering Department, Hitachi Works, Hitachi, Ltd.*
Kiyoshi Takasaki, *Nuclear Power Department, Electric Power Development Co., Ltd.*;
Shigeyuki Ezoe, *Technical and Development Department, Okano Valve Mfg.*
 5. Using Non-Intrusive Testing to Eliminate Disassembly and Inspection of Check Valves
Ernie Noviello, *Crane Movats, a Division of Crane Nuclear, Inc.*

- 6. Coupled Fluid-Structure of a Tilting Disc Check Valve using Overset Chimera Grids and 6DOF Modeling
Vijayan Parthasarathy and Paul Dionne, *CFD Research Corporation*
Ralph Schwartzbeck, *P.E., Enercon Services, Inc.*

- 1(b) Pump and Valve Performance Issues
Session Chair: R. Scott Hartley, *Idaho National Engineering and Environmental Laboratory*

- 1. Seat Leakage through Emergency Core Cooling System Check Valves
Thomas. A. Schulz, *P.E., North Atlantic Energy Service Corporation*
- 2. Large Hysteresis Errors Observed in 410 Stainless Valve Stems
Chris Smith, *Crane Nuclear*
- 3. Smooth Pump Vibration Relief - Code OM-6
Bill Phalen and Brian Lindenlaub
Arizona Public Service Co., Palo Verde Nuclear Generating Station
- 4. Application of Generalized Pressure Locking Methodology to Improve Thrust Margins in Motor and Air-Operated Wedge Gate Valves
M.S. Kalsi, *Kalsi Engrg. Inc.*
- 5. Verification by Testing of Main Feedwater Control Valves for Russian Nuclear Power Plants
Nabil Schauki, *Siemens Power Generation*
- 6. PANEL SESSION on Comprehensive Pump Test and General Pump Issues:
R. Scott Hartley, *INEEL*
Joe Colaccino, *U.S. NRC*
Joel Page, *U.S. NRC*
Rich Koch, *Ingersoll-Dresser Pump Co.*
Tom Ruggiero, *GPU Nuclear*
Dave Williams, *Southern Company Services*
Christopher Pendleton, *Consultant*

SYMPOSIUM BANQUET

Guest Speaker: Ann Compton

RECEPTION: 6:00 PM - 7:00 PM

DINNER: 7:00 PM - 9:00 PM

WEDNESDAY, JULY 19, 2000

8:00 AM TO 12 NOON: SESSION 2

- 2(a) Risk-Informed IST of Valves & Pumps
Session Chair: Gilbert L. Zigler, *ITS Corp*

- 1. Why Have Some Plants Embraced RI-IST and Others Have Not?
W. Rowley, *The Wesley Corp.*

- 2. ASCO NPP Risk-Informed IST Program for Check Valves
Jesus Garcia Rocasolano, *Tecnatom*

- 3. Risk-Informed Part 50
T. Reed, *USNRC*

- 4. Development and Implementation of Code Case OMN-1
R. Kershaw, *APS*

- 5. Risk-Informed Inservice Testing
Dave Fisher, *USNRC*

- 2(b) General Issues on Motor-Operated Valves
Session Chair: Kevin G. DeWall, *Idaho National Engineering and Environmental Laboratory*

- 1. Implementation Program of and Technical Approach to the Regulatory Recommendation on Safety-Related MOVs in Korea
Bum-Nyun Kim, Yang-Seok Kim, Sung-Geun Park, Dae-Woong Kim, and Yang-Gi Park
Korea Electric Power Company

- 2. Testing of dc Motor Actuators for Motor-Operated Valves
Kevin DeWall, John Watkins, *Idaho National Engineering and Environmental Laboratory*

3. Predicting Capability and Stroke Time in dc Motor-Operated Valves
Tom Walker, Paul Damerell, Todd Spears – *MPR Associates*
Brian Bunte, *ComEd, Chairman, BWROG VTRG*
4. Selection of Greases for Motor-Operated Valve Stem/Stem Nut Lubrication
Fabrice M. Guérout, *Atomic Energy of Canada Limited, Chalk River Laboratories*
Jean-Marie Pitard-Bouet, *Christophe Jouve, Electricité de France, R&D Division*
John Janis, *Ontario Power Generation*
5. Use of MCC Based Testing Technology for Static MOV Periodic Verification Testing
Stan Hale, *Crane Nuclear, Inc.*
6. The Joint Owners' Group MOV Periodic Verification Program – Forging Ahead With Testing and Learning
Paul Damerell, *MPR Associates*
Brian Bunte, *ComEd*
Steve Loehlein, *First Energy Nuclear Operating Corp.*
Robert Doyle, *Arizona Public Service*
Frank Winter, *BGE*

1:00 PM - 5:00 PM: SESSION 3

- 3(a) General Issues on Air-Operated Valves
Session Chair: L.J. Victory, *Enertech*
1. MOV and AOV Diagnostics Equipment Comparison
William Marriott, *Marriott Valve Services, and Stan Hale, Crane Nuclear, Inc.*
2. Improved Method for Predicting Thrust Requirements for Balanced Disk Globe Valves
Paul Knittle, *MPR Associates*
3. Solutions to Performance Problems with AOVs
Jim Tucker and Rusty Gasser, *Crane Nuclear*

4. Validated Dynamic Torque Models for Quarter-Turn Ball and Plug Valves
M. Kalsi, *Kalsi Engineering, Inc.*
5. AOV Unbalanced and Balanced Globe Valve Sizing Considering Mid-Stroke Effects
M. S. Kalsi, *Kalsi Engineering, Inc.*
6. Joint Owners Group AOV Program
Mark Coleman, *Public Service Electric & Gas*
- 3(b) O&M Code Issues on Testing of Valves and Pumps
Session Chair: Adele M. DiBiasio, *Curtiss-Wright Flow Control*
1. Codes and Rules For Inservice Testing In Spain
Jesus Garcia Rocasolano, *Tecnatom*
2. Use of Analysis in OM Code Pump and Valve Inservice Testing: A Regulator's Perspective
Joe Colaccino, *USNRC*
3. Implementation of ASME Inservice Testing Requirements at Sizewell B Colin Leighton, *Sizewell B Power Station, England*
4. Voluntary Industry Initiatives in Lieu of Regulatory Actions
Robert Hermann, *USNRC*
5. Impact of the Recent IST Rulemaking on the Future of the OM Code
Adele DiBiasio, *Curtiss-Wright Flow Control*
6. Valve and Pump Testing in the UK Nuclear Power Programme--A Regulator's View
J.B. Bartlett, *Nuclear Installations Inspectorate, UK*

THURSDAY, JULY 20, 2000

8:00 AM - NOON SESSION 4

Regulatory Activities Update

8:00 am Introduction
Session Chair: Thomas G. Scarbrough, *USNRC*

8:05 am Performance of Safety-Related Motor-Operated Valves
Thomas G. Scarbrough and Steven G. Tingen
USNRC

8:30 am Performance of Air-Operated Valves Important to Plant Safety and Other Inservice Testing Issues
Joseph Colaccino and Margaret Kotzalas
USNRC

9:00 am Current Rulemakings involving ASME OM Code
Eugene Imbro and David Terao
USNRC

9:30 am Study of Air-Operated Valves in Nuclear Power Plants
Dr. Harold L. Ornstein
USNRC

10:00 am Symposium Closing Remarks
John E. Allen and Eugene Imbro, Symposium Co-Chairs

Regulatory Issues - Interactive Sessions
(10:15 am to 12 noon)

1. Motor-Operated Valve, Pressure Locking and Thermal Binding, and Inservice Testing Update Issues
David Terao, Thomas G. Scarbrough, and Steven G. Tingen, *USNRC*
2. Air-Operated Valve, Traditional and Risk-Informed Inservice Testing, and Pump Issues
Joseph Colaccino, David C. Fischer, Harold L. Ornstein, and Margaret Kotzalas, *USNRC*



Special Guest Speaker
Symposium Banquet
Tuesday, July 18, 2000

Ann Compton

Ann Compton is a reporter for ABC NEWS.com, the first daily network newscast broadcast solely for the Internet, and former White House correspondent for ABC News. In 1974, she was the first woman to be named a full-time White House correspondent by a network news organization and was one of the youngest correspondents to receive this assignment. Ms. Compton was also ABC News Chief House of Representatives correspondent from February 1987 to January 1989.

Twice Ms. Compton has been invited to serve as a panelist on the presidential campaign debates, in 1988 and in 1992. During the 1980 political campaign, Ms. Compton covered the presidential of independent candidate John Anderson. While a White House correspondent during the 1976 election year, she was also one of ABC News' four floor reporters at the Republican and Democratic conventions. On election night, she anchored ABC News coverage of the gubernatorial races. During her years as a White House correspondent, Ms. Compton traveled to all fifty states, and across Europe, the Middle East, South America, Africa and Asia, with presidents, vice presidents and first ladies.

Her broadcast career began in Roanoke, Virginia. During her junior year at Hollins College in Virginia, she was an intern at WDBJ-TV in Roanoke. She spent her first summer after graduation covering the major flooding from Hurricane Camille during the daylight hours, rushing back to the studio each night to anchor the Eleven O'clock Report.

After a few months' leave to pursue a journalism fellowship at the Washington Journalism Center, Ms.



Compton moved to Richmond and established a State Capital bureau for WDBJ-TV.

In 1987, Ms. Compton was the chairman of the Radio Television Correspondents Association, the governing board for 2500 broadcasters covering Washington, D.C. She is a member of the Board of The Freedom Forum Center for Media Studies in New York.

Ms. Compton received the JANUS Award in May 1987, for her report, Tax Shelter, which aired on Nightline. Ms. Compton received the 1987 Outstanding Mother of the Year award from the National Mother's Day.

Ms. Compton lives in Washington, D.C., with her husband, Dr. William Hughes, and their three sons and one daughter.

**HOTEL RESERVATIONS FORM
HYATT REGENCY WASHINGTON
ON CAPITOL HILL**

400 NEW JERSEY AVENUE,
NW·WASHINGTON, DC 20001·202-737-1234

The Hyatt Regency Washington – at the doorstep of the nation's capital. The Hyatt is just minutes from the Mall, Smithsonian Museums, Lincoln, Washington, Jefferson, and Vietnam Memorials, and walking distance from Judiciary Square, the National Gallery of Art and the Air and Space Museum. The hotel is located two blocks from AMTRAK's Union Station and the Metro subway. It is only 10 minutes from Washington National Airport and 45 minutes from Washington International Airports. The hotel offers indoor valet parking for 200 cars. A block of rooms has been reserved for the 6th NRC/ASME Symposium on Valve & Pump Testing at a rate of \$139.00 single/\$159.00 double per night.

ADVANCE DEPOSIT

All reservations require a one night's deposit (including 14.5% tax) to guarantee the reservation.

Payment can be made by:

(a) An enclosed check or money order covering the first night's stay; or

(b) Major Credit card Number with expiration date and signature.

The Hyatt Regency will not hold your reservation after 6:00 PM on the day of arrival without guaranteeing the reservation as described above. Deposits will be refunded only if cancellation notification is received at least 24 hours prior to arrival.

REGISTRATION FORM SIXTH NRC/ASME SYMPOSIUM ON VALVE AND PUMP TESTING

Registrants will receive a discount rate of \$375.00 if their registration form is postmarked not later than **July 1, 2000**. After that date, the late registration fee and on-site registration fee will be \$450.00. Admission for one person to the banquet on July 18, 2000 is included in the fee. Extra banquet tickets can be purchased for an additional \$49.00 per person.

Cancellation requests must be received in writing not later than July 1, 2000 in order to receive a refund. Such requests must be sent to G. M. Eisenberg ASME M/S 20W1 3 Park Ave. New York, NY 10016. Note: refunds for cancellations are subject to an administrative fee.

You may make your payment by personal check, company check or major credit card. Purchase orders will NOT be accepted. Make checks payable to ASME. Payment must be made in U.S. dollars.

Please clearly print the information requested below:

Name _____

Company: _____

Address: _____

City: _____ State/Province _____

Country: _____ Zip Code: _____

Phone: _____ Fax: _____

E-mail: _____

Name of additional Banquet attendee(s) [SPES] _____

I plan to attend the following sessions (check as appropriate):

- ☐ 1a [SE1A] ☐ 2a [SE2A] ☐ 3a [SE3A] ☐ 4 [SE4]
☐ 1b [SE1B] ☐ 2b [SE2B] ☐ 3b [SE3B]

Additional banquet attendees [ASBT] :No. _____ @ \$49.00

continues

Hotel Reservations Form – Hyatt Regency Washington

SIXTH NRC/ASME SYMPOSIUM ON VALVE AND PUMP TESTING
JULY 17-20, 2000

BOOKING# ASME

Type of Room	No. of Rooms	Convention Rates	Regency Club*
Single (1 person)		\$139	
Double (2 persons)			\$159

*Regency Club accommodations include a full American Breakfast and use of Regency Club Lounge in addition to special guest room services and amenities. They are offered at an additional Charge of \$35 per room, based on availability.

Date of Arrival _____

Time of Arrival _____

Date of Departure _____

Check in Time 3 PM.

Check out Time 12 Noon

Name _____

Company _____

Address _____

Tel./FAX _____

Gold Passport No. _____

Sharing Room with _____

Reservations received after 6/26/00 or after the room block has been filled, are subject to availability and prevailing rates.

Guaranteed by (mark one):

- ☐ Check or money order
☐ Visa ☐ MasterCard ☐ Discover
☐ American Express ☐ Diners Club

Card# _____

Expiration Date _____

Card Holder's name _____

Card Holder's Signature _____

Preferred banquet entrée for each person covered by this form:

Roast Prime Rib-Beef [BEEF] : No. _____
Chicken Wellington [CHIC] : No. _____
Other (please specify) [OTHER] : _____
No. _____ Description: _____

PAYMENT

☐ Symposium Registration thru 7-1-00 @ \$375 ea. \$ _____
☐ Symposium Registration after 7-1-00 @ \$450 ea. \$ _____
☐ Additional banquet tickets [ASBT] Qty. _____ @ \$49 ea. \$ _____
☐ Check# _____ enclosed
☐ Charge:
☐ Visa ☐ Master Card ☐ Discover ☐ American Exp. ☐ Diners Clu
Card No. _____ Exp. Date: _____
Card Holder's Name _____
(print clearly)
Card Holder's Signature _____

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You may also register on the ASME web site at:

http://www.asme.org/conf/nrc_asme_reg.htm